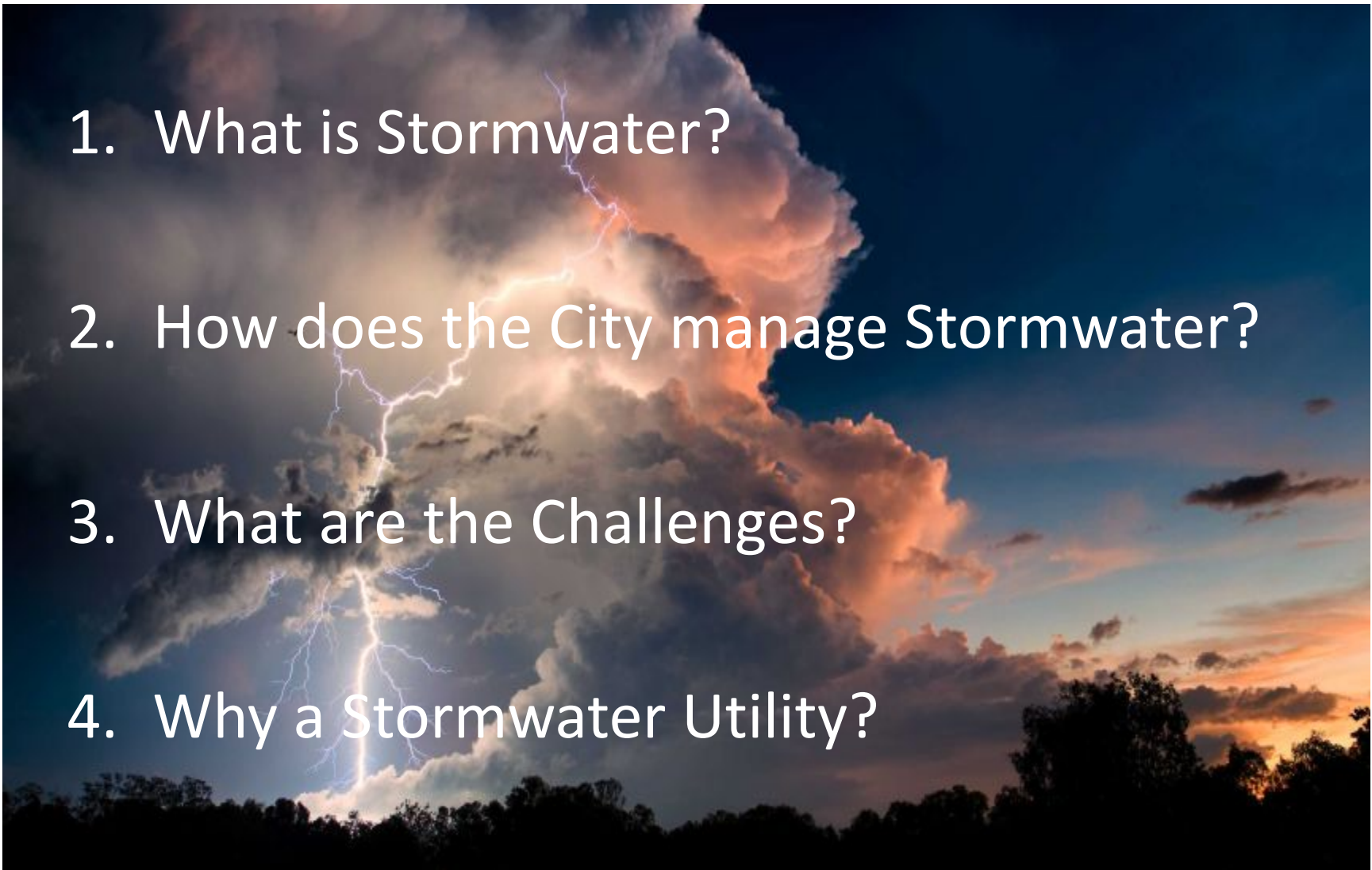
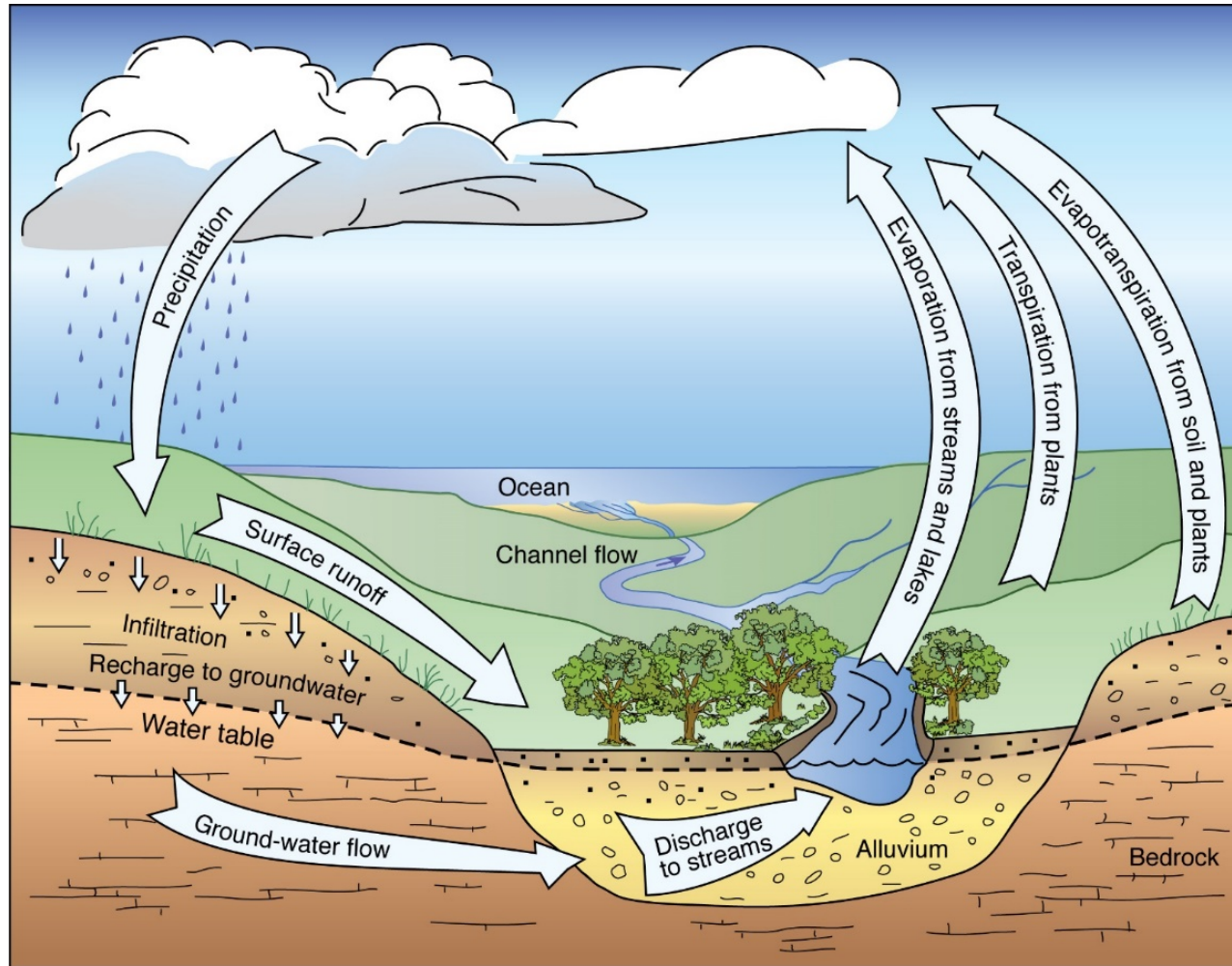




STORMWATER UTILITY

- 
1. What is Stormwater?
 2. How does the City manage Stormwater?
 3. What are the Challenges?
 4. Why a Stormwater Utility?

What is stormwater runoff?



Whittemore and Schoneweis

THE HYDROLOGIC CYCLE

Rainfall to Runoff Ratio

Stormwater Management is Needed



Undeveloped Condition:

30% of rainfall runoff from site
70% of rainfall infiltrates into ground

Developed Conditions:

Residential

60% of rainfall runoff from site
40% of rainfall infiltrates into ground

Commercial

90% of rainfall runoff from site
10% of rainfall infiltrates into the ground



Where does it go?

[Click Here to Read](#)



Three inter-related water systems



Stormwater



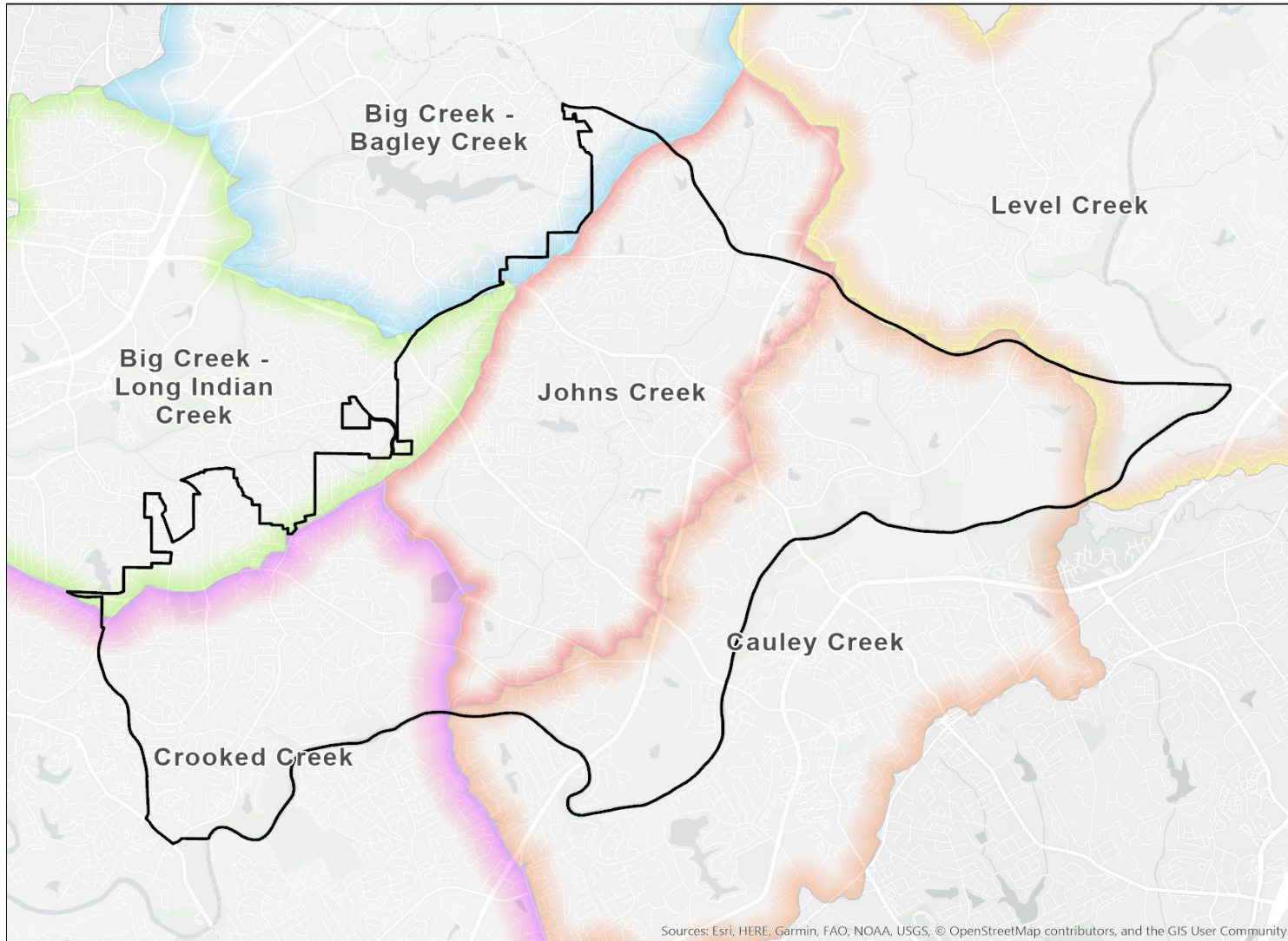
Wastewater



Potable Water

[Click Here to Read More...](#)

Six (6) City Basins



Stormwater Assets



Catch Basin



Detention Pond - Dry



Detention Pond - Wet



Drop Inlet - Grated



Headwall



Manhole – Junction Box



Ditch



Pedestal Inlet



Pipe

How Does the City Manage Stormwater?



Site Development Review

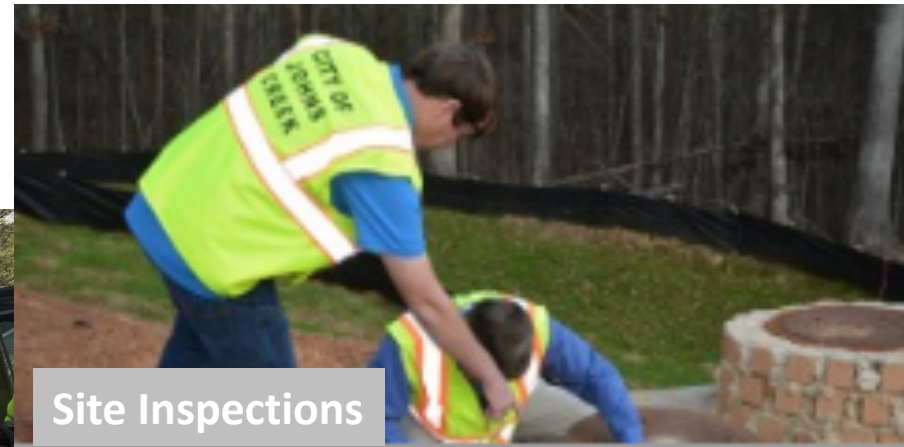


Floodplain Management



Erosion Control Program

What is the City Doing?



System Inventory Assessment



[Click here to demonstrate GIS](#)

Conveyance #BB13254C	
Feature ID	BB13254C
FeatureID (old)	SW3336
Watershed	Big Creek - Bagley Creek
Type	Pipe
Structure # Up	BB17273S
Structure # Down	BB17274S
Rise/Run (inches)	18/18
Shape	Circle
Material	CMP
Length (ft)	
Width	
Constructed on	
Last Inspected	10/15/2019, 1:00 AM
Closest Address	535 Grovsner Terrace
Condition	Heavy Damage
Siltation (1-10)	3
Ownership	City
Inspection	CMP pipe completely collapsed
Comments	
Click here for Inspection Video #1	
Click here for inspection Video #2	

Maintenance Responsibility

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION 2007-08-69

A RESOLUTION TO APPROVE AND AUTHORIZE A STORMWATER MAINTENANCE POLICY FOR THE CITY OF JOHNS CREEK

WHEREAS, The City of Johns Creek shall provide for the general health, safety and welfare of the inhabitants of the City; and

WHEREAS, The City has determined the need to provide for a policy for the maintenance of pipes, open channels, and all other stormwater conveyances in order to provide for abatement of nuisances and properly protect the health, safety and welfare of the citizens of the City; and

WHEREAS, The Stormwater Maintenance Policy establishes a level of service and extent of service for the public and private portions of the drainage system in the City; and

WHEREAS, The City is authorized to regulate and maintain the public right-of-ways within the geographical boundaries of the City and to provide for abatement of nuisances on public property; and

WHEREAS, The Stormwater Maintenance Policy attached hereto and incorporated herein by reference, has been reviewed.

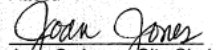
NOW THEREFORE BE IT RESOLVED by the Mayor and Council of the City of Johns Creek and it is resolved by the Authority of said City Council that, by passage of this resolution, the Mayor and Council of the City of Johns Creek approve and authorize the Stormwater Maintenance Policy of the City of Johns Creek.

SO RESOLVED AND EFFECTIVE, this the 13th day of August, 2007.

Approved:


Michael E. Bodker, Mayor

Attest:

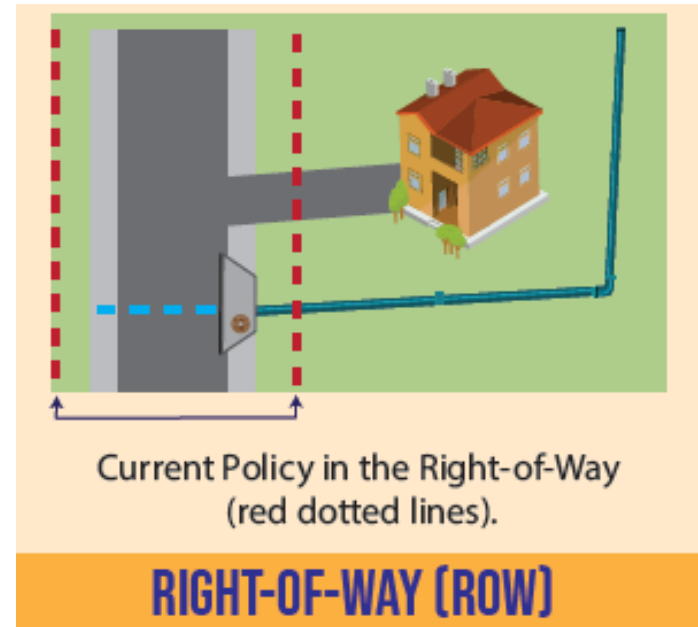

Joan C. Jones, City Clerk



RESOLUTION 2007-08-69 - APPROVE AND AUTHORIZE A STORMWATER MAINTENANCE POLICY

PAGE 1 of 1

Johns Creek



2. Maintenance Responsibility:

2.1. Public Stormwater Drainage System - The City shall conduct periodic inspections for maintaining that portion of Stormwater Drainage System for which it is legally responsible as set forth in Section 1.2 above. Information collected during these inspections will be utilized in evaluating the condition of the system and in setting priorities for operational and maintenance work as well as capital improvement projects.

2.2. Private Stormwater Drainage System - It shall be the responsibility of the property owner to maintain the operational characteristics of the Private Stormwater Drainage System located on their property, including but not limited to all easements, channels, detention basins, retention ponds, and other impoundments, so that they continue to operate as they were originally designed and as more specifically set forth in Sections 2.2.1, 2.2.2, 2.2.3, and 2.2.4 below.

What are the Challenges?



**Corrugated Metal Pipe (CMP)
Joint Separation**



CMP – Pipe Collapse



Catch Basin Repair



Catch Basin - Siltation



Headwall Separation



Missing Pipe Invert



What are the Challenges?

- Impact to aquatic wildlife, private property, and road system
- Lack of maintenance causes water quantity and quality problems
- Meeting State and Federal requirements
- Recent changes to State regulations requiring enhanced management and water quality
- Significant administrative costs



Infographic for Considered EOS



STORMWATER SERVICES

Extent of Service

BACKGROUND

The storm drainage system is a network of pipes, open ditches, and other structures that collect and transport stormwater runoff to the nearest stream or lake. Certain elements of the storm drainage system are maintained by the City, while other elements are maintained by the private property owner or Homeowners Association.

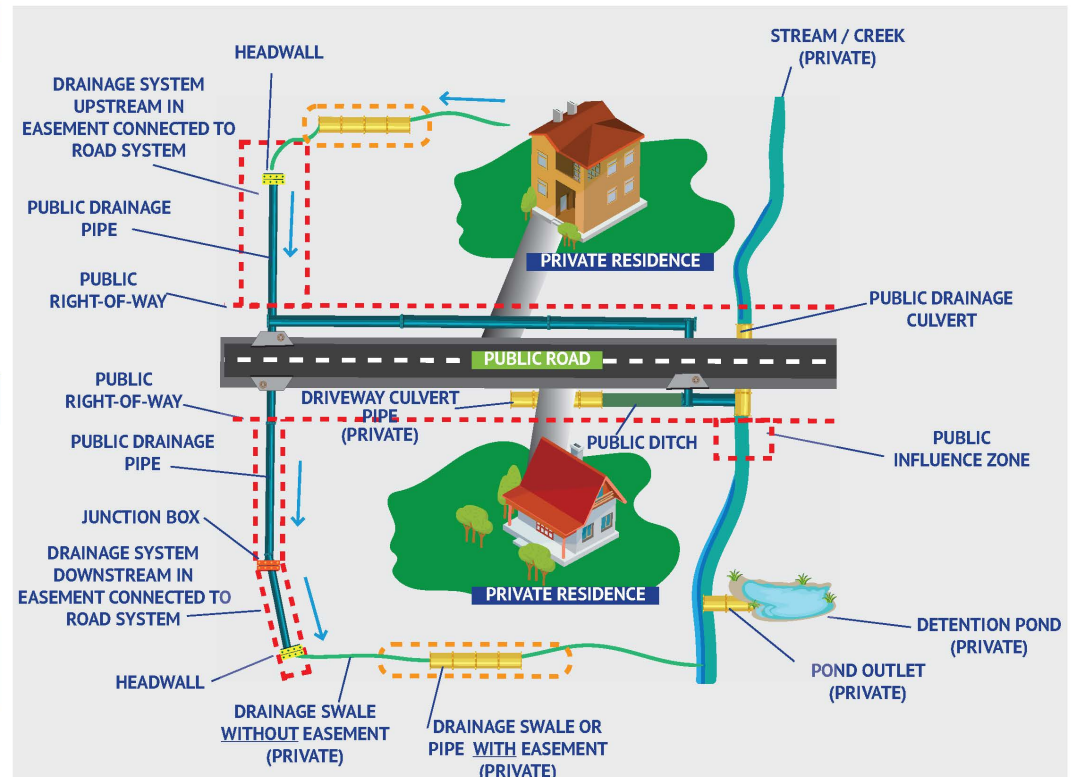
The City of Johns Creek extent of service (EOS) policy refers to the components of the storm drainage system maintained by the City. The level of service (LOS) policy defines the maintenance activities performed by the City.

LEVEL OF SERVICE

In the public drainage system the City provides inspections and prioritizes and makes necessary repairs. In private drainage systems, the City provides regulatory enforcement and may provide emergency response in isolated instances. All stormwater concerns will be reviewed by the City to determine whether the system is public or private.

PUBLIC DRAINAGE SYSTEMS

- Public streets and rights-of-way
- Public property (city-owned)
- Piped drainage system (easement) in residential areas connected to the public road system



System Maintenance, Repair & Replacement

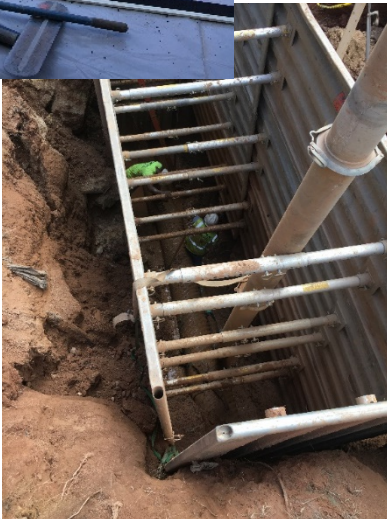
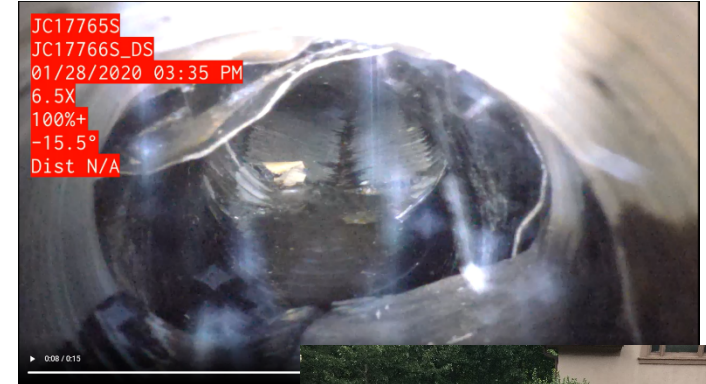
- System inspection in 2019 of 34,000 assets
- July 2020 – Desire to expand Extent of Service
- Expands system from 11,000 to 34,000 assets
- Estimate C&M costs ~\$16,000,000 over 10 years
- Existing replacement list – 155 projects totaling \$3.4 million



Cost of Operations and Maintenance is Expensive



120' – 18" Pipe
\$60,000



Cost of Operations and Maintenance is Expensive

25' – 18" Pipe
\$11,000

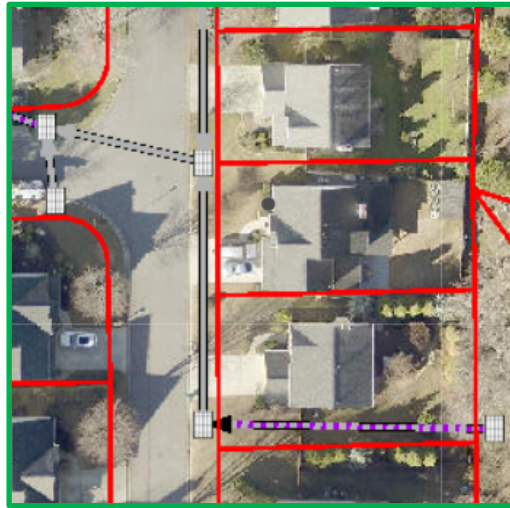


Cost of Operations and Maintenance is Expensive

Even using less intrusive methods

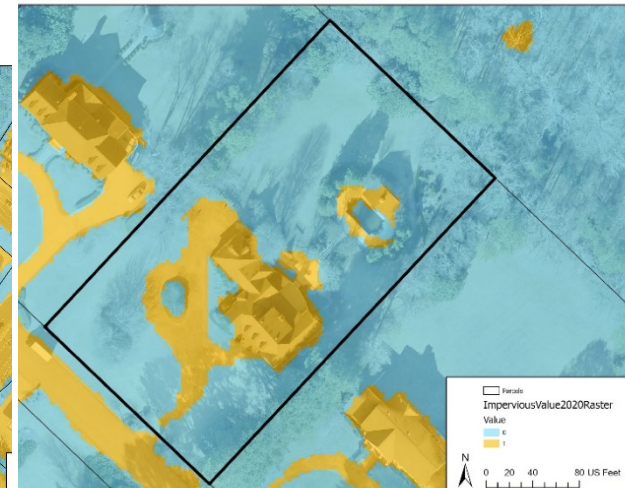


290' – 18" Pipe
\$24,000



Why a Stormwater Utility?

- Desire to not impact existing program funding
- Investigated funding sources -August 2020
- Stormwater Utility Fee:
 - Directly related to runoff
 - Runoff area - impervious surface + pervious area
 - Most equitable
 - Dedicated Fund



Stormwater Utility – Rate Structure

- Rate Structure/Classification
 - Residential / Non-Residential
 - Equivalent Residential Unit

Proposed Rate Structure in Equivalent Residential Units

Rate Structure	Fee	ERU = 4,000 SF		
		Value	Lower	Upper
SFR - 0.5 ERU	0.5 ERU	2,000	401	3,000
SFR - 1 ERU	1.0 ERU	4,000	3,001	5,000
SFR - 1.5 ERUs	1.5 ERU	6,000	5,001	7,000
SFR - 2 ERUs	2.0 ERU	8,000	7,001	9,000
SFR - 2.5 ERUs	2.5 ERU	10,000	9,001	11,000
Large Residential	Area / ERU	> 11,000	11,001	
Non-Residential	Area / ERU	> 400	401	

Stormwater Utility – Credit Manual

- Credit Manual
 - Various credits made available by qualification requirements

Credit Description	Residential	Non-Residential	Maximum Prorated User Fee Credit
<i>GSMM Stormwater Criteria</i>			
• Water Quality	✓	✓	10%
• Channel Protection	✓	✓	10%
• Overbank Flood Protection	✓	✓	10%
• Extreme Flood Protection	✓	✓	10%
Watershed Stewardship	✓	✓	10%
Septic Tank Maintenance	✓	✓	10%
Watershed Improvement Project Participation	✓	✓	10%
No Direct Discharge	✓	✓	40%
Water Resources Education Program		✓	10%
NPDES Industrial Stormwater General Permit Compliance		✓	10%
HOT SPOT BMP		✓	10%

Stormwater Utility - Benefits

- Shift to proactive maintenance
 - mitigate and minimize infrastructure failure
 - focus on customer service
- Improvement to quality of life and provision of clean water
- Organize and consolidate required reporting efforts

Municipal Separate Storm Sewer Systems (MS4)



Goal of MS4 permit = Stop Pollution



- Mr. Raindrop's Journey <https://cleanwatercampaign.org/educational-resources/>
- FOG Fighter <https://www.youtube.com/watch?v=funGlEcAAXo>
- 1st place 2015 Metro Water District Pet Waste PSA Contest <https://vimeo.com/130765471>

For More Information

Access the links below

- Council Work Session – April 13, 2020
(Stormwater 101)
 - [Video](#)
 - [Memo](#)
 - [Presentation](#)
- Council Work Session – June 1, 2020
(Stormwater System Assessment)
 - [Video](#)
 - [Memo](#)
- Council Work Session – July 13, 2020
(Extent of Service Options)
 - [Video](#)
 - [Memo](#)
- Council Work Session – August 10, 2020
(Stormwater Funding Options)
 - [Video 1](#) & [Video 2](#)
 - [Memo](#)
- Council Work Session – October 19, 2020
(Education & Outreach Strategy)
 - [Video](#)
 - [Memo](#)
- Council Work Session – December 7, 2020
(Extent of Service Policy Revision)
 - [Video](#)
 - [Memo](#)
- Council Work Session – January 11, 2021
(Organizational Structure Options)
 - [Video](#)
 - [Memo](#)
- Council Work Session – February 8, 2021
(Rate Structure and Credit Manual)
 - [Video](#)
 - [Memo](#)

Questions?



Send questions or comments to:
StormwaterUtility@johnscreekgga.gov

Visit the Stormwater Management Website:
<https://www.johnscreekgga.gov/residents/community-development/stormwater-management>